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10/675,825	09/30/2003	Rajesh K. Batra	3197-00006/COD	6656

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EXAMINER

ZHANG, SHIRLEY X

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/675,825	Applicant(s) BATRA ET AL.	
	Examiner SHIRLEY X. ZHANG	Art Unit 2444	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This final office action is prepared in response to the applicant's amendments and arguments filed on December 4, 2008 as a reply to the non-final office action mailed on September 4, 2008.

Claims 1, 11, 18, 21 and 27 have been amended;

Claims 1-30 are now pending;

Response to Arguments

Applicant's arguments and amendments filed on *** have been carefully considered but deemed unpersuasive in view of the following new grounds of rejection as explained herein below, necessitated by Applicant's amendments to the claims which significantly affected the scope thereof, and will require further search and consideration.

Accordingly, THIS ACTION IS MADE FINAL. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

1. The rejection of claims 27-30 under 35 U.S.C. 101 are maintained.

Although the amended specification removes the language that leads one to concluding that a machine-readable medium can be "a signal" - unpatentable subject matter, the claim language "a machine-readable medium including a plurality of instructions" may still be understood as meaning that the "machine-readable medium" is "a plurality of instructions," i.e., software, which is also unpatentable subject matter. Therefore, claim 27-30 are again rejected under 35 U.S.C. 101 for claiming unpatentable subject matter.

Art Unit: 2444

2. Regarding Applicant's remarks that the reference Denton did not disclose "*the captured data being associated with operational parameters of the tunable optical device; and streaming the data from the tunable optical device*" as recited in claims 1, 11, 18, 21 and 27, Examiner asserts that the "operational metrics" disclosed by Denton in paragraph [0052] anticipates the "operational parameters of the tunable optical device" recited in the claim, while the "retrieving and reporting on the current values of selected ones of the monitoring metrics" in Denton, [0052] anticipates "streaming the data from the tunable optical device."

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. **Claims 27-30** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 27 recites "an article of manufacture comprising a machine-readable medium including a plurality of instructions". The said claim language may be understood as meaning that the "machine-readable medium" is "a plurality of instructions," i.e., software, which is unpatentable subject matter.

While the claim is directed towards an article of manufacture, the article is made up of only software, and as such, the article is directed towards software, making the article non-patentable subject matter.

Art Unit: 2444

Claims 28-30 are dependent on claim 27, but failed to further limit the claimed invention to statutory subject matter. Therefore, claims 28-30 inherit the 35 U.S.C. 101 issue of the independent claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-30** are rejected under 35 U.S.C. 102(e) as being anticipated by Denton et al. (U.S. Patent application publication No. 2003/0198236, hereinafter “**Denton**”).

Regarding claim 1, Denton disclosed a method, comprising:

periodically capturing data from a tunable optical device during operation of the tunable optical device ([0052] disclosed monitoring function 426 for capturing operational metrics from the optical components); and

streaming the data from the tunable optical device ([0052], “retrieving and reporting on the current values of selected ones of the monitoring metrics”).

Regarding claim 2, Denton disclosed the method of claim 1 wherein streaming the data comprises outputting a plurality of data frames from a serial interface coupled to the tunable

Art Unit: 2444

optical device (Fig. 1, “Support and Control Electronics”), wherein each data frame of the plurality of data frames includes data captured from the tunable optical device at a particular time ([0026], “HDLC”).

Regarding claim 3, Denton disclosed the method of claim 2, further comprising formatting the data into the plurality of data frames ([0052], “RMON”, “Ethernet”, “PPP/HDLC”).

Regarding claim 4, Denton disclosed the method of claim 2 wherein each data frame includes a frame start code, an index number, a standard data section, and a device specific data section ([0052], “RMON”, “Ethernet”, “PPP/HDLC”).

Regarding claim 5, Denton disclosed the method of claim 4 wherein each data frame includes a checksum ([0052], “RMON”, “Ethernet”, “PPP/HDLC”).

Regarding claim 6, Denton disclosed the method of claim 1, further comprising buffering the captured data at the tunable optical device prior to streaming the data from the tunable optical device ([0034-0035], [0043] and [0048]).

Regarding claim 7, Denton disclosed the method of claim 1, further comprising receiving a user injected signal at the tunable optical device to artificially change an operating factor of the tunable optical device ([0050]).

Regarding claim 8, Denton disclosed the method of claim 7, further comprising routing the user injected signal to a controller of the tunable optical device (Fig. 1 and [0038-0042]).

Regarding claim 9, Denton disclosed the method of claim 1, further comprising receiving the data at a data acquisition unit communicatively coupled to the tunable device (Fig. 2 and [0026]).

Regarding claim 10, Denton disclosed the method of claim 9, further comprising storing the data at a storage device communicatively coupled to the data acquisition unit ([0043] and [0048]).

Regarding claim 11, Denton disclosed an apparatus, comprising: a tunable optical device (Fig. 1); and a controller coupled to the tunable optical device, the controller including a serial interface coupled to a processor, the controller to capture a plurality of sets of real-time data from the tunable optical device during operation of the tunable optical device, the plurality of sets of real-time data being associated with at least one operational parameter of the tunable optical device, the controller to stream the plurality of sets of real-time data from the tunable optical device (Figs. 1-2, [0026] and [0052]).

Art Unit: 2444

Regarding claim 12, Denton disclosed the apparatus of claim 11 wherein each set of the plurality of sets real-time data includes a plurality of data points regarding the tunable optical device captured at a unique time (fig. 2 and [0026]).

Regarding claim 13, Denton disclosed the apparatus of claim 11 wherein the serial interface comprises one of an SPI (Serial Peripheral Interface), a UART (Universal Asynchronous Receiver/Transmitter), an I2C (Inter-integrated Circuit), a USB (Universal Serial Bus) port, or a SCSI (Small Computer System Interface) ([0030] and [0035]).

Regarding claim 14, Denton disclosed the apparatus of claim 11 wherein the serial interface is coupled to a select pin, a data clock pin, and a data pin of the controller, the select pin to signal a device communicatively coupled to the serial interface to prepare to receive the plurality of sets of real-time data ([0048]), the data clock pin to indicate the data rate that the plurality of sets of real-time data are to be outputted from the serial interface, the data pin to output the plurality of sets of real-time data from the tunable optical device ([0025]).

Regarding claim 15, Denton disclosed the apparatus of claim 11, further comprising a buffer coupled to the controller to temporarily store at least a portion of the plurality of sets of real-time data ([0034-0035], [0043] and [0048]).

Art Unit: 2444

Regarding claim 16, Denton disclosed the apparatus of claim 11, further comprising an analog-to-digital (ADC) coupled to the controller to convert at least a portion of the plurality of sets of real-time data from analog to digital ([0042]).

Regarding claim 17, Denton disclosed the apparatus of claim 11 wherein the plurality of sets of real-time data are captured at a periodic rate based on a processing speed of the processor ([0030]).

Regarding claim 18, Denton disclosed a system, comprising: a tunable optical device; and a controller coupled to the tunable optical device, the controller comprising: a processor; and at least one flash device coupled to the processor, the at least one flash device including firmware instructions which when executed by the processor perform operations comprising: capturing a first plurality of data points from the tunable optical device at a first time, the data points being associated with at least one operational parameter of the tunable optical device; and streaming the first plurality of data points from the tunable optical device (Figs. 1-2 and [0026] and [0052]).

Regarding claim 19, Denton disclosed the system of claim 18 wherein execution of the firmware instructions further perform operations comprising forming the first plurality of data points into a first data frame ([0030], [0033-0034]).

Art Unit: 2444

Regarding claim 20, Denton disclosed the system of claim 19 wherein execution of the firmware instructions further perform operations comprising: capturing a second plurality of data points from the tunable optical device at a second time; forming the second plurality of data points into a second data frame; and streaming the second plurality of data points from the tunable optical device ([0030], [0033-0034]).

Regarding claim 21, Denton disclosed a method, comprising: receiving a data stream from a tunable optical device at a data acquisition unit, wherein the data stream includes data periodically captured from the tunable optical device, the data being associated with at least one operational parameter of the tunable optical device; and storing the data in a storage device communicatively coupled to the data acquisition unit ([0030], [0034], [0043], [0048] and [0052]).

Regarding claim 22, Denton disclosed the method of claim 21, further comprising receiving a select signal at the data acquisition unit to indicate to the data acquisition unit to prepare to receive the data stream ([0048]).

Regarding claim 23, Denton disclosed the method of claim 21 wherein receiving the data stream comprises receiving a plurality of data frames at a serial interface coupled to the data acquisition unit, wherein each data frame of the plurality of data frames includes a plurality of data points captured from the tunable optical device at a particular time ([0033-0035]).

Art Unit: 2444

Regarding claim 24, Denton disclosed the method of claim 23 wherein each data frame of the plurality of data frames includes a frame start code, an index number, a standard data section, and a device specific data section ([0030-0031]).

Regarding claim 25, Denton disclosed the method of claim 24, further comprising synchronizing the receiving of the plurality of data frames through the index number of at least one data frame of the plurality of data frames ([0033-0035], "HDLC", "PPP").

Regarding claim 26, Denton disclosed the method of claim 21, further comprising sending a user injected signal from the data acquisition unit to the tunable optical device, wherein the user injected signal to artificially change an operating factor of the tunable optical device ([0050]).

Regarding claim 27, Denton disclosed an article of manufacture comprising: a machine-readable medium including a plurality of instructions which when executed perform operations comprising: capturing real-time data from a tunable optical device during operation of the tunable optical device; forming a plurality of data frames from the real-time data, each data frame of the plurality of data frames including at least one data point captured from the tunable optical device at a particular time, the data being associated with at least one operational parameter of the tunable optical device; and streaming the plurality of data frames from the tunable optical device ([0026], [0034], [0043], [0048] and [0052]).

Art Unit: 2444

Regarding claim 28, Denton disclosed the article of manufacture of claim 27 wherein streaming the plurality of data frames comprises sending the plurality of data frames from a serial interface coupled to the tunable optical device ([0033-0035]).

Regarding claim 29, Denton disclosed the article of manufacture of claim 28 wherein execution of the plurality of instructions further perform operations comprising taking the at least one data point from a buffer coupled to the serial interface to form a data frame of the plurality of data frames ([0033-0035]).

Regarding claim 30, Denton disclosed the article of manufacture of claim 28 wherein execution of the plurality of instructions further perform operations comprising sending a select signal to a select line of the serial interface to signal a device communicatively coupled to the tunable optical device to prepare to receive streaming of the plurality of data frames ([0048]).

Conclusion

THIS ACTION IS FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR

Art Unit: 2444

1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHIRLEY X. ZHANG whose telephone number is (571)270-5012. The examiner can normally be reached on Monday through Friday 8:00am - 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shirley X. Zhang/
Examiner, Art Unit 2444
2/18/2009

/Paul H Kang/

Application/Control Number: 10/675,825

Page 13

Art Unit: 2444

Primary Examiner, Art Unit 2444